

REMARKS

By the above amendment, the independent claims 12 and 16, and therewith the dependent claims, have been amended to clarify features of the present invention that conductive material is buried within and surrounded by the insulating layer, which insulating layer is formed on the surface of the electrode so that the conductive material, as recited, is necessarily a separate and distinct element from the electrode, as recited.

Furthermore, the language of the claims has been clarified to recite the feature, as illustrated in Fig. 7, for example, that one portion of the insulating layer, as represented by the portion 23A where conductive material 23 is buried within and surrounded by the insulating layer, has a thickness which is greater than a thickness of another portion of the insulating layer, as represented by the portion 22A where conductive material is not buried and which extends from a central part of the electrode 22 to the one portion of the insulating layer where the conductive material is buried. Thus, as illustrated in Figs. 7 and 10 of the drawings of this application, the insulating layer where conductive material is not buried, at the central part of the electrode, has a smaller thickness than the thickness of the insulating material at a peripheral part of the electrode where conductive material is buried within and surrounded by the insulation layer, the conductive material being electrically connected to the power source. Applicants submit the structural arrangement enables the advantages that the thinner that the insulating layer is in the central part, the greater the electrostatic attracting force which is applicable to a wafer in the form of a substrate disposed on the electrode, becomes, as pointed out in the amendment filed May 9, 2006. Applicants submit that the aforementioned features, which have been clarified by the present amendment, are not disclosed or taught in the cited art.

Applicants note that new dependent claims 20 and 21 have been presented which recite the feature that the another portion of the insulating layer where no conductive material is buried has a substantially constant thickness.

The rejection of claims 12, 13, 15, 16, 18 and 19 under 35 USC 103(a) as being unpatentable over Ogahara (US Patent No. 5,958,265) in view of Sill et al (US Patent No. 6,367,413), Shamouilian et al (US Patent No. 6,557,248) and Hao (US Patent No. 6,188,564) and the rejection of claim 17 under 35 USC 103(a) as being unpatentable over Ogahara (US Patent No. 5,958,265) in view of Sill et al (US Patent No. 6,367,413), Shamouilian et al (US Patent No. 6,557,2489) and Hao (US Patent No. 6,188,564) further in view of Nakano et al (US Patent No. 6,270,618), such rejections are traversed insofar as they are applicable to the present claims and reconsideration and withdrawal of the rejections are respectfully requested.

As to the requirements to support a rejection under 35 USC 103, reference is made to the decision of In re Fine, 5 USPQ 2d 1596 (Fed. Cir. 1988), wherein the court pointed out that the PTO has the burden under '103 to establish a prima facie case of obviousness and can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. As noted by the court, whether a particular combination might be "obvious to try" is not a legitimate test of patentability and obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. As further noted by the court, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

Furthermore, such requirements have been clarified in the decision of In re Lee, 61 USPQ 2d 1430 (Fed. Cir. 2002) wherein the court in reversing an obviousness rejection indicated that deficiencies of the cited references cannot be remedied with conclusions about what is "basic knowledge" or "common knowledge".

The court pointed out:

The Examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do not adequately address the issue of motivation to combine. This factual question of motivation is immaterial to patentability, and could not be resolved on subjected belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher."... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion. (emphasis added)

In applying the combination of Ogahara, Sill et al and Shamouilian et al to the features as recited in independent claims 12 and 16 and the dependent claims thereof, the Examiner recognizes that "Ogahara in view of Sill et al and Shamouilian et al do not teach thickness of insulating layer is greater in the peripheral portion (where first and second conductive materials are formed) of the electrode than the thickness in the central part of the electrode." (emphasis added).

Although applicants submit that the combination of Ogahara, Sill et al and Shamouilian et al do not disclose or teach the other structural features of independent claims 12 and 16 and the dependent claims, assuming arguendo, that in accordance with the Examiner's contention that such features are disclosed, as recognized by the Examiner, the combination "do not teach thickness of insulating

layer is greater in the peripheral portion (where first and second conductive materials are formed) of the electrode than the thickness in the central part of the electrode", and applicants submit that contrary to the position set forth by the Examiner, Hao does not overcome the deficiencies of this combination.

At the outset, applicants note that claims 12 and 16 recite the feature that the conductive material is a separate and distinct element from the electrode on which surface the insulating material is formed, and such claims have been amended to clarify the feature that the conductive material is buried within and surrounded by the insulating layer. Further, as noted above, each of claims 12 and 16 have been amended to clarify the feature that one portion of the insulating layer, where the conductive material is buried within and surrounded by the insulating layer, has a thickness which is greater than a thickness of another portion of the insulating layer, where the conductive material is not buried, and which extends from a central part of the electrode to the one portion of the insulating layer where the conductive material is buried.

Looking to Hao, the Examiner contends that this patent teaches an apparatus in Figs. 3, 5A and 5B that includes an electrostatic chuck 316 for supporting a wafer 302 and which includes a dielectric layer 318 formed over a metal (conductive material 320). Applicants note that as clearly described in column 5, lines 24 - 29 of Hao, the dielectric layer 318 is formed on a surface of the metal layer 320, which serves as an electrode. It is readily apparent while a power supply is connected to the electrode 320 (320A and 320B), the dielectric layer 318 does not have conductive material buried therein, and the dielectric layer 318 does not surround conductive material 320, which conductive material is also connected to the power supply. Although the Examiner contends that Hao further "teach (Figs. 5A - 5C) that

by varying the geometry (thickness) of dielectric layer [Fig. 5C shows thickness of dielectric layer (524B) is greater at periphery portion (where conductive material are located) compared to thickness of center of chuck (524E)]", irrespective of the contentions by the Examiner, assuming arguendo, that 526 in Fig. 5C represents an electrode, and 524 represents a dielectric layer formed on the surface of the electrode 526, there is no disclosure or teaching in Hao that any of the members 524A - 524I of the dielectric layer 524 have conductive material buried within and surrounded by the dielectric layer or portions thereof, as recited in independent claims 12 and 16 of this application. Furthermore, while the Examiner refers to the thickness of dielectric portion 524B of Hao in Fig. 5C being greater than the thickness of portion 524E at a center of the electrode 526, applicants note that claims 12 and 16 recite the feature that one portion of the insulating layer where the conductive material is buried within and surrounded by the insulating layer has a greater thickness than another portion of the insulating layer where the conductive material is not buried and which extends from a central part of the electrode to the one portion of the insulating layer. Thus, it is readily apparent that Hao does not disclose or teach the recited features of claims 12 and 16 with respect to the insulating layer having one portion and another portion, as defined, and having the thickness as defined. Accordingly, applicants submit that Hao does not overcome the deficiencies of the combination of Ogahara, Sill et al and Shamouilian et al, as recognized by the Examiner, and the proposed combination with Hao fails to provide the claimed features as set forth in claims 12 and 16 and the dependent claims thereof. In this regard, applicants submit that the Examiner has engaged in a hindsight reconstruction, utilizing the principle of "obvious to try" without regard to the disclosed features of the individual patents which is not proper. See, In re Fine,

supra and In re Lee, supra. Accordingly, applicants submit that all claims patentably distinguish over this proposed combination of references and should be considered allowable thereover.


Applicants note that newly added dependent claims 20 and 21 further define the feature that the another portion of the insulating layer has a substantially constant thickness, noting that claims 12 and 16 recite the feature that the another portion extends from a central portion of the electrode to the one portion of the insulating layer where conductive material is buried and surrounded by the insulating layer. It is readily apparent that Hao also fails to disclose or teach such features and all claims patentably distinguish over the proposed combination, as suggested by the Examiner.

In view of the above amendments and remarks, applicants submit that all claims present in this application should now be in condition for allowance and issuance of a notice of allowance is respectfully requested.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 500.39750VX1), and please credit any excess fees to such deposit account.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP



Melvin Kraus
Registration No. 22,466

MK/jla
(703) 312-6600